

**STATE OF LOUISIANA**  
**DEPARTMENT OF NATURAL RESOURCES**  
**OFFICE OF CONSERVATION**  
**INJECTION AND MINING DIVISION**  
**UNDERGROUND INJECTION CONTROL PROGRAM**  
  
**ANNUAL PROGRAM REPORT**  
**LOUISIANA FISCAL YEAR 2022**  
**(July 1, 2021 - June 30, 2022)**  
**Prepared March 21, 2023**

**1. Program Administration:**

All deliverables summarized in the State Fiscal Year 2022 Work Plan, Table 4, Page 14 were submitted to the U.S. Environmental Protection Agency (USEPA), Region 6.

**2. Program, Regulatory, or Statutory Changes:**

The following program, regulatory, and statutory changes in the Louisiana UIC Program took place during State Fiscal Year 2022:

- a. A public hearing regarding Louisiana's Class VI primary enforcement (primacy) application was held on July 14, 2021.
- b. LA R.S. 30:23 was amended to add underground storage of hydrogen, ammonia, nitrogen, compressed air, and the noble gases to the previously listed hydrocarbons and carbon dioxide.\*
- c. LA R.S. 30:1103 and 1104 were amended to allow the commissioner of conservation to hold confidential any information that EPA deems to be Confidential Business Information in the same manner and to the same extents as the EPA.\*
- d. LA R.S. 30:1110 was amended to allow the commissioner to charge a fee that does not exceed the actual or anticipated cost to the state for the review of the permit or application. The statute was also revised to remove the seven hundred fifty thousand dollar cap allowed for administration of the program.\*

\*These statutory changes were mistakenly included on the Annual Program Report – Louisiana Fiscal Year 2021. However, the amendments only became effective on August 1, 2021, necessitating their inclusion on this report.

**3. Personnel Activities:**

- a. 7-12-2021: Pamela (Joy) Berryhill was hired as Administrative Program Specialist A.

- b. 8-9-2021: Seija Meaux was hired as a Wages As Earned (WAE) employee (all WAE positions are part-time) (Geological Section)
- c. 9-8-2021: Gwendolyn Kirby was hired as a WAE (Administrative)
- d. 9-20-2021: Madison (Maddie) Avery was hired as a Petroleum Scientist 1 (Geological Section)
- e. 9-28-2021: Ryan Reiffel was hired as a WAE (Enforcement Section)
- f. 10-4-2021: Brian Barbera was hired as a Petroleum Scientist 3 (Engineering Section)
- g. 10-4-2021: Cody Todd was hired as a Petroleum Scientist 3 (Engineering Section)
- h. 10-4-2021: Grant Lopez was hired as a WAE (Geological Section)
- i. 11-29-2021: Joanna Walker was hired as a Petroleum Scientist 3 (Geological Section)
- j. 1-10-2022: Patrick Ragan was hired as a Petroleum Scientist 1 (Engineering Section)
- k. 1-28-2022: Gwendolyn Kirby resigned as WAE (Administrative)
- l. 2-27-2022: Kellie McNamara resigned as Petroleum Scientist Manager (Engineering Section)
- m. 3-20-2022: Brian Barbera resigned as Petroleum Scientist 3 (Engineering Section)
- n. 4-8-2022: Paul (Brian) Cunningham was hired as a WAE (Geological Section)
- o. 5-22-2022: Pamela (Joy) Berryhill resigned as Administrative Program Specialist A
- p. 5-30-2022: Matt Aranyosi was promoted to Petroleum Scientist Manager (Engineering Section)

#### **4. Field Surveillance**

Witnessed Part I Mechanical Integrity Pressure Tests on 879 distinct injection/disposal wells and performed on-site inspections of 1,958 distinct injection/disposal wells.

#### **5. Compliance/Enforcement:**

- a. Issued 54 Compliance (Administrative) Orders for regulatory violations concerning 70 separate injection wells.
- b. Issued 867 separate Notices of Violations against 658 distinct injection wells for various operating, maintenance, or reporting violations of Louisiana UIC Program regulations.
- c. Shut-in 59 injection wells for mechanical integrity violations.
- d. Operators returned 233 injection wells with mechanical integrity violations back to compliance.
- e. Assessed \$157,000 in civil penalties and collected \$104,000 in civil penalties.

**6. Class I Injection Well Activities:**

- a. Applications Under Review:

Premier Environmental  
SG Haller Waste Disposal No. 001, Appl. No. 41382  
Wildcat – SO LA Lafayette Dist., Plaquemines Parish  
Non-hazardous waste – Conversion

HRWN Bossier, LLC  
HRWN Bossier Waste Disposal Well No. 01  
Elm Grove Field – Bossier Parish  
Commercial non-hazardous waste – New Drill

- b. No applications were denied.
- c. Five (5) applications to re-permit existing Class I wells were received.
- d. No Class I wells plugged & abandoned.

**7. Louisiana-Texas Memorandum of Understanding: – Reciprocal Notice of UIC Well Applications within One Mile of the States' Respective Border:**

- a. The Railroad Commission of Texas forwarded no UIC well applications to the Louisiana Office of Conservation for comment.
- b. The Louisiana Office of Conservation forwarded one (1) well application to the Railroad Commission of Texas for comment.

**8. Class II Noncommercial Exploration and Production Waste Disposal Well Activities:**

a. Salt Water Disposal:

- i. Received 42 applications to drill new injection wells or to convert existing wells to injection.
- ii. Issued 35 permits to drill new injection wells or convert existing wells to injection.
- iii. Denied one (1) application to drill new injection wells or convert existing wells to injection.
- iv. Eleven (11) applications were withdrawn by the applicant.
- v. Processed 196 applications to conduct various well maintenance (workover) operations

b. Annular mud disposal applications:

- i. One (1) application was received.
- ii. No applications were denied.
- iii. No applications were approved.
- iv. Two (2) applications were withdrawn.

**9. Class II Enhanced Recovery (ER) Activities:**

- a. Received seven (7) permit applications to drill new ER wells or convert existing wells to ER injection.
- b. Issued five (5) permit applications to drill new ER wells or convert existing wells to ER injection.
- c. Approved 17 applications to conduct various well maintenance (work over) operations.
- d. No applications were withdrawn by the applicant.

**10. Class II Commercial Exploration and Production Waste Disposal Well Activity:**

a. Commercial Well Applications Currently Under Review:

PA PROSPECTS, LLC  
Reimer Calhoun SWD No. 003, Appl. No. 43266  
Red River-Bull Bayou, Red River Parish

PA PROSPECTS, LLC  
Reimer Calhoun SWD No. 004, Appl. No. 43267  
Red River-Bull Bayou, Red River Parish

R360 ENVIRONMENTAL SOLUTIONS OF LA, LLC  
Templet SWD No. 005, Appl. No. 42243  
Lake Long Field, Lafourche Parish

b. New Well Permits Issued:

Two (2) permits were issued.

c. Permits Denied:

No permits were denied.

**11. Hydrocarbon Storage in Solution-Mined Salt Caverns:**

a. Applications in Review:

Hazelwood Holdings, LLC  
HEC No. Y-1, Appl. No. 41505  
Port Barre Salt Dome, Saint Landry Parish  
Liquid Hydrocarbon Storage

Hazelwood Holdings, LLC  
HEC No. Y-1, Appl. No. 41506  
Port Barre Salt Dome, Saint Landry Parish  
Liquid Hydrocarbon Storage

Hazelwood Holdings, LLC  
HEC No. C-1, Appl. No. 41507  
Port Barre Salt Dome, Saint Landry Parish  
Liquid Hydrocarbon Storage

Hazelwood Holdings, LLC  
HEC No. C-2, Appl. No. 41508  
Port Barre Salt Dome, Saint Landry Parish  
Liquid Hydrocarbon Storage

Hazelwood Holdings, LLC  
HEC No. C2-1, Appl. No. 41509  
Port Barre Salt Dome, Saint Landry Parish

Liquid Hydrocarbon Storage

Hazelwood Holdings, LLC  
HEC No. C-3, Appl. No. 41510  
Port Barre Salt Dome, Saint Landry Parish  
Liquid Hydrocarbon Storage

Hazelwood Holdings, LLC  
HEC No. C-4, Appl. No. 41511  
Port Barre Salt Dome, Saint Landry Parish  
Liquid Hydrocarbon Storage

Hazelwood Holdings, LLC  
HEC No. C4-1, Appl. No. 41512  
Port Barre Salt Dome, Saint Landry Parish  
Liquid Hydrocarbon Storage

Hazelwood Holdings, LLC  
HEC No. ET-1, Appl. No. 41513  
Port Barre Salt Dome, Saint Landry Parish  
Liquid Hydrocarbon Storage

Hazelwood Holdings, LLC  
HEC No. M-1, Appl. No. 41514  
Port Barre Salt Dome, Saint Landry Parish  
Liquid Hydrocarbon Storage

Hazelwood Holdings, LLC  
HEC No. C3-1, Appl. No. 41515  
Port Barre Salt Dome, Saint Landry Parish  
Liquid Hydrocarbon Storage

LA STORAGE, LLC  
Pelican No. 004, Appl. No. 41930  
Gas Hydrocarbon Storage

LA STORAGE, LLC  
Pelican No. 03A, Appl. No. 41931  
Gas Hydrocarbon Storage

TARGA DOWNSTREAM LLC  
LPG Storage Well No. 013, Appl. No. 41762  
Hackberry Salt Dome, Cameron Parish

### Liquid Hydrocarbon Storage

TARGA DOWNSTREAM LLC  
LPG Storage Well No. 014, Appl. No. 41763  
Hackberry Salt Dome, Cameron Parish  
Liquid Hydrocarbon Storage

- b. Newly permitted hydrocarbon storage well applications:

Two (2) permits were issued.

- c. Approved 95 applications to conduct various well maintenance or remedial operations on hydrocarbon storage wells.

## **12. Class III Brine Solution Mining Projects:**

- a. Class-III salt solution mining well applications under review:

Boardwalk Louisiana Midstream, LLC  
BLM No. 003, Appl. No. 40662  
Napoleonville Salt Dome, Assumption Parish

Boardwalk Louisiana Midstream, LLC  
BLM No. 004, Appl. No. 40663  
Napoleonville Salt Dome, Assumption Parish

Eagle US 2, LLC  
Eagle Brine No. 025, Appl. No. 39172  
Sulphur Mines Salt Dome, Calcasieu Parish

Hazelwood Holdings, LLC  
HEC No. Y-1, Appl. No. 41489  
Port Barre Salt Dome, Saint Landry Parish

Hazelwood Holdings, LLC  
HEC No. Y-1, Appl. No. 41490  
Port Barre Salt Dome, Saint Landry Parish

Hazelwood Holdings, LLC  
HEC No. C-1, Appl. No. 41491  
Port Barre Salt Dome, Saint Landry Parish

Hazelwood Holdings, LLC

HEC No. C-2, Appl. No. 41497  
Port Barre Salt Dome, Saint Landry Parish

Hazelwood Holdings, LLC  
HEC No. C2-1, Appl. No. 41498  
Port Barre Salt Dome, Saint Landry Parish

Hazelwood Holdings, LLC  
HEC No. C-3, Appl. No. 41499  
Port Barre Salt Dome, Saint Landry Parish

Hazelwood Holdings, LLC  
HEC No. C-4, Appl. No. 41500  
Port Barre Salt Dome, Saint Landry Parish

Hazelwood Holdings, LLC  
HEC No. C4-1, Appl. No. 41501  
Port Barre Salt Dome, Saint Landry Parish

Hazelwood Holdings, LLC  
HEC No. ET-1, Appl. No. 415102  
Port Barre Salt Dome, Saint Landry Parish

Hazelwood Holdings, LLC  
HEC No. M-1, Appl. No. 41503  
Port Barre Salt Dome, Saint Landry Parish

Hazelwood Holdings, LLC  
HEC No. C3-1, Appl. No. 41504  
Port Barre Salt Dome, Saint Landry Parish

LA STORAGE, LLC  
Pelican No. 004, Appl. 41929  
Hackberry Salt Dome, Cameron Parish

Pine Prairie Energy Center, LLC  
PP-CW No. 006, Appl. No. 32182  
Pine Prairie Salt Dome, Evangeline Parish

Pine Prairie Energy Center, LLC  
PP-CW No. 007, Appl. No. 32601  
Pine Prairie Salt Dome, Evangeline Parish



Martin Operating Partnership, LP  
Storage Well M No. 003, Appl. No. 40497  
Arcadia Salt Dome, Bienville Parish

Martin Operating Partnership, LP  
Storage Well M No. 004, Appl. No. 40498  
Arcadia Salt Dome, Bienville Parish

TARGA DOWNSTREAM LLC  
LPG Storage Well No. 013, Appl. No. 41760  
Hackberry Salt Dome, Cameron Parish

TARGA DOWNSTREAM LLC  
LPG Storage Well No. 014, Appl. No. 41761  
Hackberry Salt Dome, Cameron Parish

b. Newly Permitted Solution Mining Wells and Salt Caverns:

BOARDWALK LOUISIANA MIDSTREAM, LLC  
Choctaw Storage Well No. 034, Appl. No. 41806  
Bayou Choctaw Salt Dome, Iberville Parish - 975851

SHINTECH LOUISIANA, LLC  
Wilbert No. 007, Appl. No. 41279  
White Castle Salt Dome, Iberville Parish

SHINTECH LOUISIANA, LLC  
Wilbert No. 008, Appl. No. 41280  
White Castle Salt Dome, Iberville Parish

SHINTECH LOUISIANA, LLC  
Wilbert No. 009, Appl. No. 41281  
White Castle Salt Dome, Iberville Parish

c. No applications withdrawn.

d. Approved 73 applications to do various well maintenance (workover) operations.

**13. Class-V Well Projects:**

a. Permitted 62 wells associated with aquifer remediation projects that are under the supervision of the Louisiana Department of Environmental Quality (LDEQ).

- b. Approved one (1) applications to do various well maintenance (workover) operations.

#### **14. Training, Seminars, Conferences**

7-9-2021: Baton Rouge Geological Society – History of the Jennings Oil and Gas Field  
7-15-2021: University of Texas Bureau of Economic Geology webinar – GeoH2  
7-27-2021: Groundwater Protection Council webinar - Tools for Planning, Development, and Improvement of Aquifer Storage and Recovery Projects: Siting and Recovery Efficiency Assessments  
8-12-2021: Baton Rouge Geological Society – An Action Manual for Geologists Wanting Sensible Flood Protection  
9-20-2021: Solution Mining Research Institute Fall Conference  
9-27-2021: 2021 GWPC Annual Conference  
10-5-2021: KAPPA Saphir Training  
10-20-2021: Conducted training for LSU Petroleum Engineering “Fundamentals of CCUS”  
10-27-2021: Presented “Carbon Capture (Class VI) Wells” for Louisiana Air and Waste Management Association Annual Conference  
11-2-2021: Annual Gulf Coast Operators Meeting  
11-9-2021: NRAP WEBINAR SERIES, WEBINAR #24 - Thermal Fracturing Induced by CO2 Injection.  
11-10-2021: LDEQ Environmental Geoscience and Engineering Seminar: Ethics for Geoscientists and Engineers 2021  
11-12-2021: Baton Rouge Geological Society - Update on the Capital Area Groundwater Conservation District  
12-10-2021: Texas Bureau of Economic Geology webinar on Hydrogen Storage in Salt Caverns  
1-28-2022: Texas Bureau of Economic Geology webinar on shale integrity in storage reservoirs  
2-7-2022: KAPPA Saphir Training  
2-10-2022: through 2-11-2022: DOE Bulk Hydrogen Storage Workshop  
2-14-2022: KAPPA Saphir Training  
2-17-2022: Texas Bureau of Economic Geology/RISC webinar “Integrated Geologic Characterization to Understand Causal Factors of Induced Seismicity in the Delaware Basin, Texas and New Mexico”  
2-17-2022: KAPPA Saphir Training  
2-21-2022: KAPPA Saphir Training  
3-3-2022: Baker Hughes training on CCUS Technologies  
3-4-2022: LSU Geology seminar “Mapping Geological Hazards Using Satellite Remote Sensing.”  
3-7-2022: KAPPA Saphir Training  
3-8-2022 through 3-11-2022: PHMSA Course PL1325 – Safety Evaluation of Underground Storage Facilities  
3-11-2022: Baton Rouge Geological Society “Property-Specific Flood Risk”

3-14-2022: KAPPA Saphir Training  
3-17-2022: KAPPA Saphir Training  
3-21-2022: KAPPA Saphir Training  
3-21-2022 through 3-23-2022: Applied Stratigraphix – Structural Geology Mapping Basics  
3-29-2022 through 3-31-2022: AAPG CCUS Conference (virtual)  
3-31-2022 through 4-1-2022: LSU Mineral Law CLE  
4-4-2022: New Orleans Geological Society “Louisiana Geological Survey: Past, Present, and Future of LGS”  
4-19-2022: Regional Carbon Management Workshop  
4-27-2022: Salt Cavern training with Enterprise  
4-28-2022: RISC Induced Seismicity Webinar  
4-29-2022: LSU Geology Seminar “A Tour of Lithospheric Features in the Southern U.S. Identified with Broadband Seismology, with Some Implications”  
5-2-2022 through 5-6-2022: Solution Mining Research Institute annual conference  
5-6-2022: Texas Bureau of Economic Geology webinar “Traps and Seals for CO2 Storage in Norway”  
5-13-2022: Texas Bureau of Economic Geology webinar “Stratigraphic correlation: Old concepts inform new approaches”  
5-16-2022 through 5-17-2022: CCS Southern States Energy Board Conference  
5-19-2022 through 5-20-2022: 5th International Workshop on Offshore Geologic CO2 Storage  
6-10-2022: Baton Rouge Geological Society "Diversity, Inclusion, & the Future of Geoscience"  
6-14-2022: SPE/IOGCC Webinar: “Carbon Capture, Utilization, and Storage. Technology, Economics, Processes, and Challenges Associated With Permitting Storage Sites in the U.S.”  
6-21-2022 through 6-23-2022: GWPC Annual and UIC Conference

## 15. Work Plan Target Accomplishments: July 1, 2021 - June 30, 2022

The following table summarizes the proposed targeted and actual accomplished surveillance activities for Louisiana State Fiscal Year 2022:

	ROUTINE WELL INSPECTIONS		OC/IMD WITNESSED MIT'S		PARTS I & II MECHANICAL INTEGRITY TESTS		COMPLIANCE REVIEWS ‡	
WELL CLASS	Target Value	Actual Value	Target Value	Actual Value	Target Value	Actual Value	Target Value	Actual Value
I	85	73	85	78	35	40	40	73
II (SWD & ER)	2,500	3,362	1,300	965*	800	553*	500	1158
II (Storage)	50	88	Not Applicable †		30	43	40	100
III	25	29	Not Applicable †		18	9	40	72
VI	Unknown	No Wells Exist	Unknown	No Wells Exist	Unknown	No Wells Exist	Unknown	No Wells Exist

\* Differences from predicted values and prior years reporting may be the result of (1) redefining the categories based on clarification emails from EPA. The number of wells listed are those wells that had both a Part I and Part II review/MIT in the reporting timeframe, and (2) transitioning from the covid shutdown, which discouraged face-to-face interactions. Note that the numbers of routine well inspections increased (operator presence not required).

\*\* Actual witnessed MIT's for Class II wells were lower than planned due to Covid-19 site access restrictions along with reduced Oil & Gas prices and staffing shortages that caused many Operators to shut in fields and/or delay workovers.

† Tests on salt caverns occur over several days making witnessing by OC personnel impractical. Test data recorded continuously with the data submitted to OC for review.

‡ In-house review of well file by OC personnel ensuring compliance with permit or regulations.